

RF Test Data for BT(BDR/EDR) (Conducted Measurement)**Product Name: Wireless Headphones****Trade Mark: Tranya****Test Model: X2****FCC ID: 2A4AX-X2****Environmental Conditions**

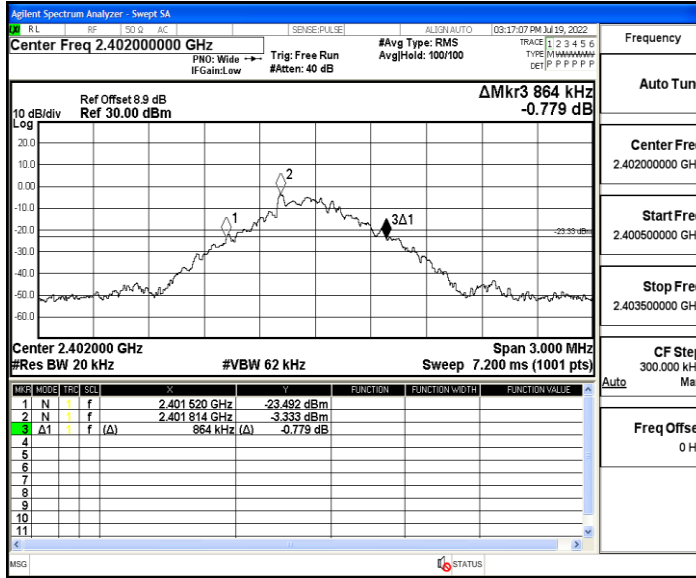
| | |
|--------------------|-----------|
| Temperature: | 25.5°C |
| Relative Humidity: | 55% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Anna Hu |
| Supervised by: | Hugo Chen |
| NOTE | N/A |

Appendix A: 20dB Emission Bandwidth**Test Result**

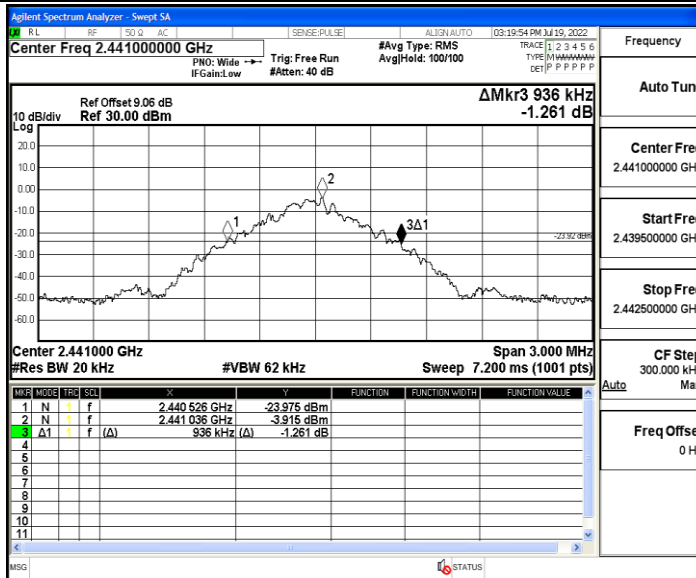
| TestMode | Antenna | Channel | 20db EBW[MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|----------|---------|---------|---------------|----------|----------|------------|---------|
| DH5 | Ant1 | 2402 | 0.864 | 2401.520 | 2402.384 | --- | --- |
| | | 2441 | 0.936 | 2440.526 | 2441.462 | --- | --- |
| | | 2480 | 0.930 | 2479.520 | 2480.450 | --- | --- |
| 2DH5 | Ant1 | 2402 | 1.311 | 2401.322 | 2402.633 | --- | --- |
| | | 2441 | 1.329 | 2440.313 | 2441.642 | --- | --- |
| | | 2480 | 1.335 | 2479.313 | 2480.648 | --- | --- |
| 3DH5 | Ant1 | 2402 | 1.305 | 2401.322 | 2402.627 | --- | --- |
| | | 2441 | 1.269 | 2440.331 | 2441.600 | --- | --- |
| | | 2480 | 1.335 | 2479.307 | 2480.642 | --- | --- |

Test Graphs

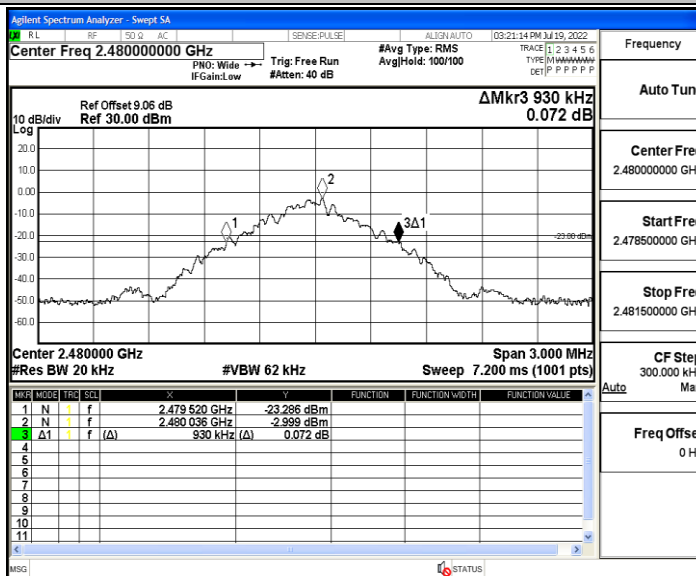
DH5_Ant1_2402



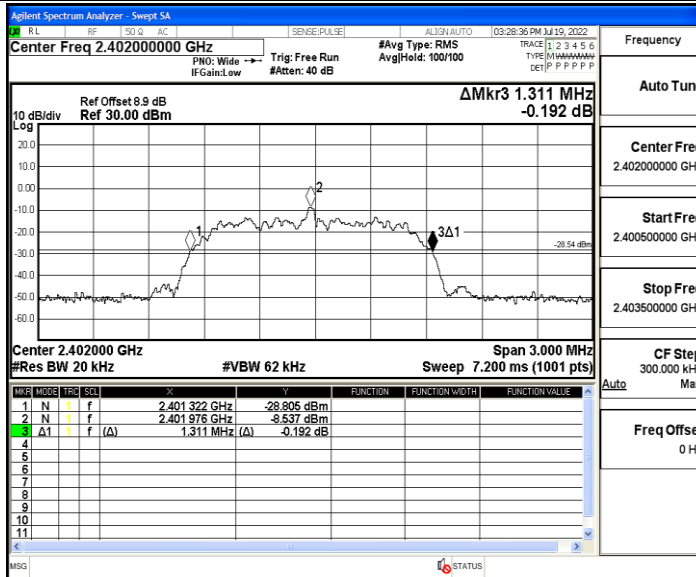
DH5_Ant1_2441



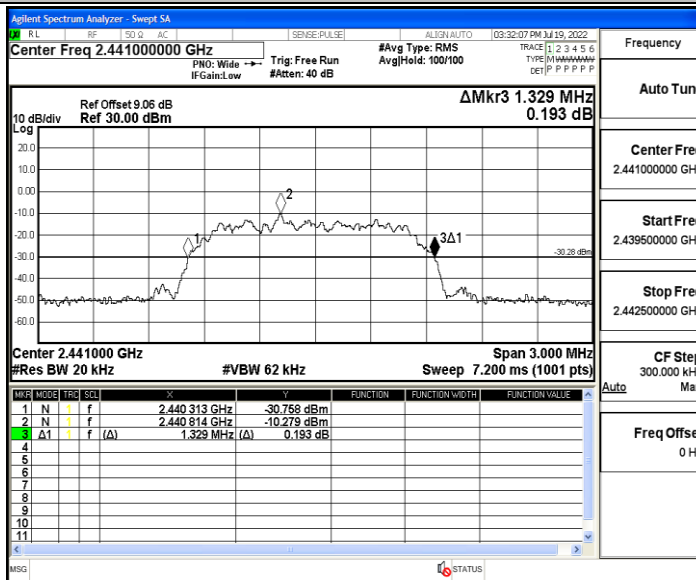
DH5_Ant1_2480



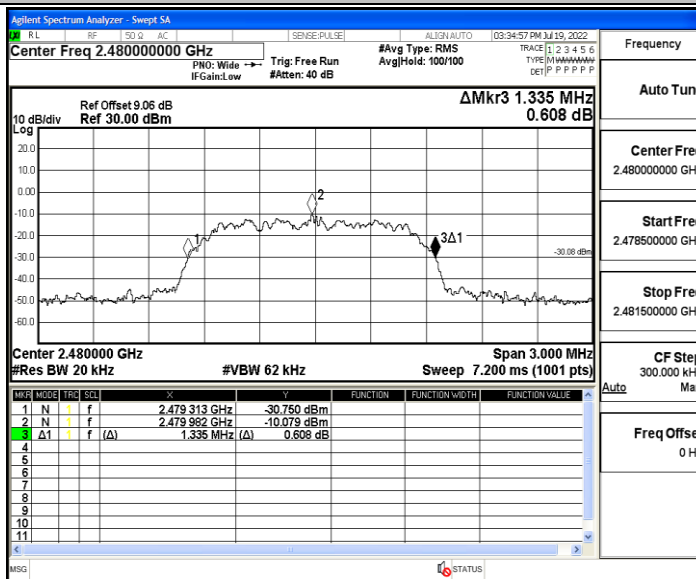
2DH5_Ant1_2402



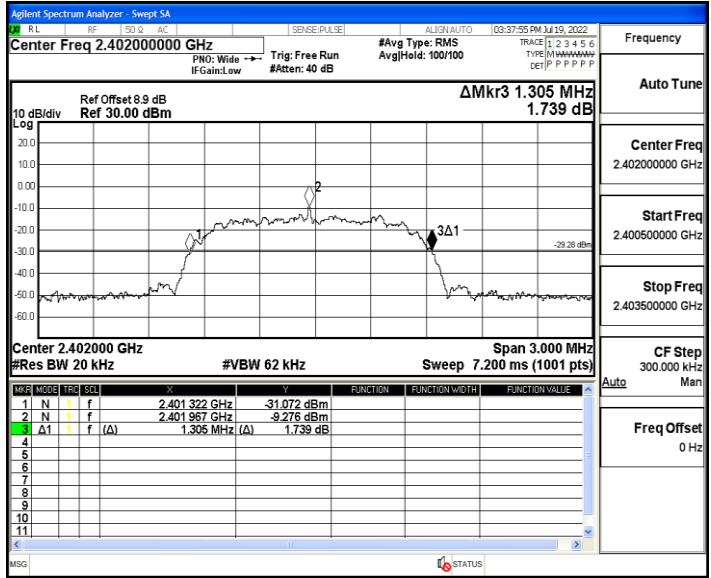
2DH5_Ant1_2441



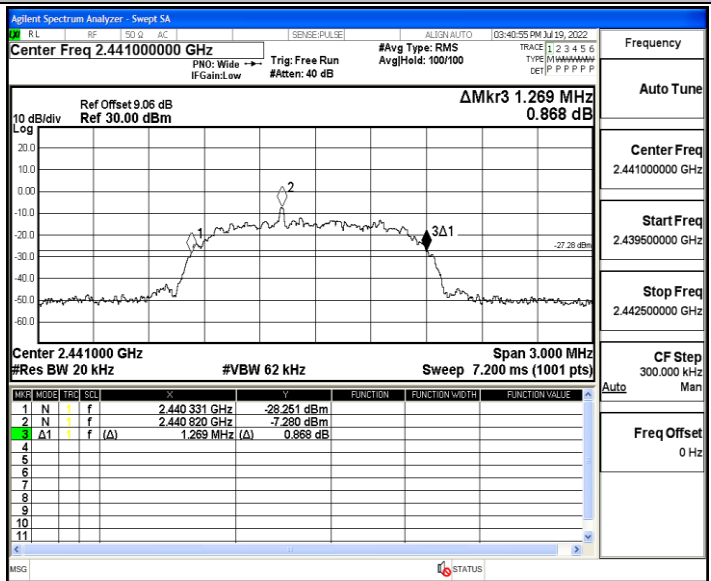
2DH5_Ant1_2480



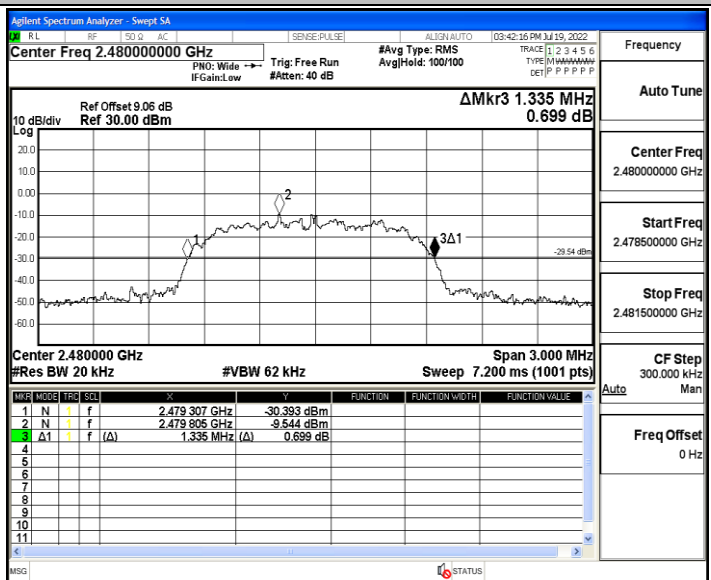
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



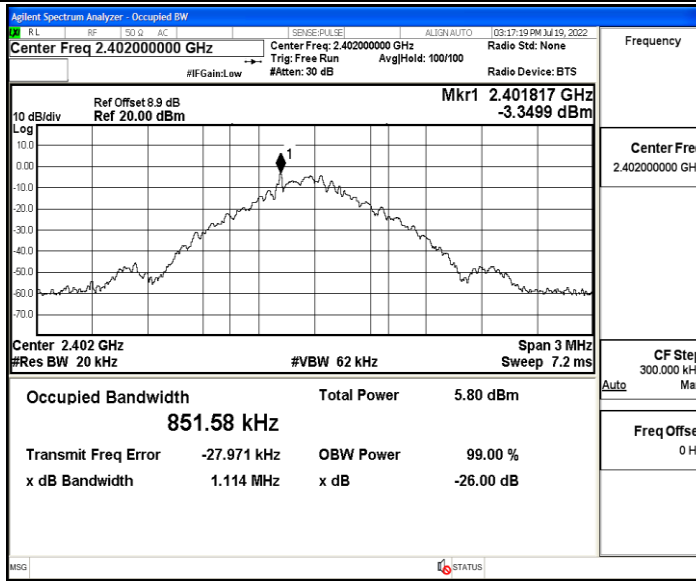
Appendix B: Occupied Channel Bandwidth

Test Result

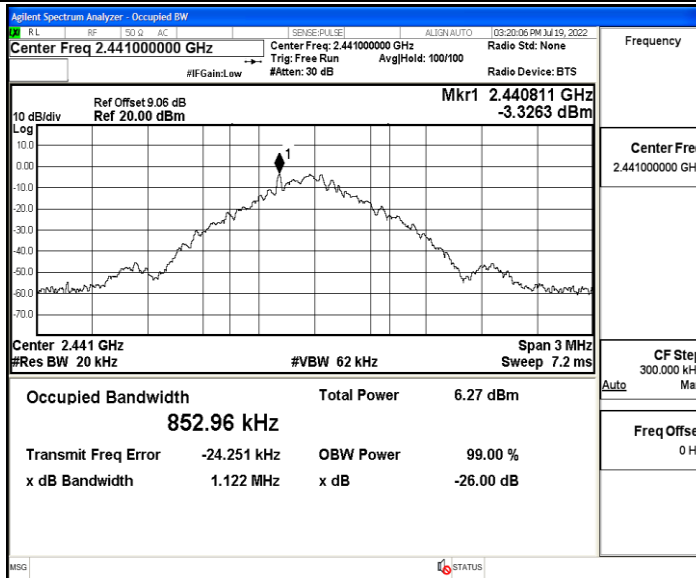
| TestMode | Antenna | Channel | OCB [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|----------|---------|---------|-----------|----------|----------|------------|---------|
| DH5 | Ant1 | 2402 | 0.85158 | 2401.546 | 2402.398 | --- | --- |
| | | 2441 | 0.85296 | 2440.549 | 2441.402 | --- | --- |
| | | 2480 | 0.86500 | 2479.545 | 2480.410 | --- | --- |
| 2DH5 | Ant1 | 2402 | 1.1815 | 2401.385 | 2402.566 | --- | --- |
| | | 2441 | 1.1852 | 2440.386 | 2441.571 | --- | --- |
| | | 2480 | 1.1971 | 2479.381 | 2480.578 | --- | --- |
| 3DH5 | Ant1 | 2402 | 1.1846 | 2401.381 | 2402.565 | --- | --- |
| | | 2441 | 1.1821 | 2440.386 | 2441.568 | --- | --- |
| | | 2480 | 1.1933 | 2479.375 | 2480.568 | --- | --- |

Test Graphs

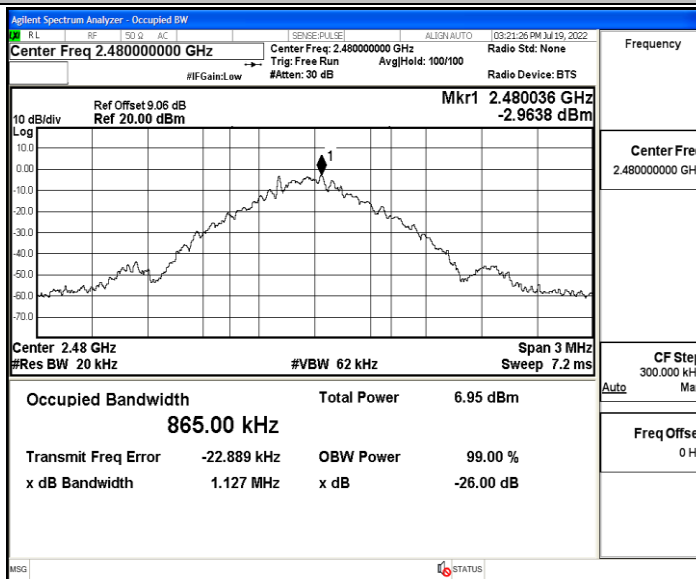
DH5_Ant1_2402



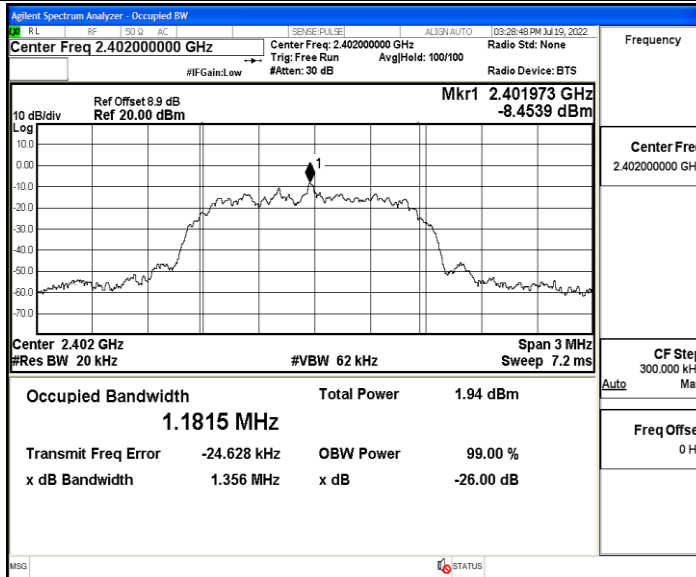
DH5_Ant1_2441



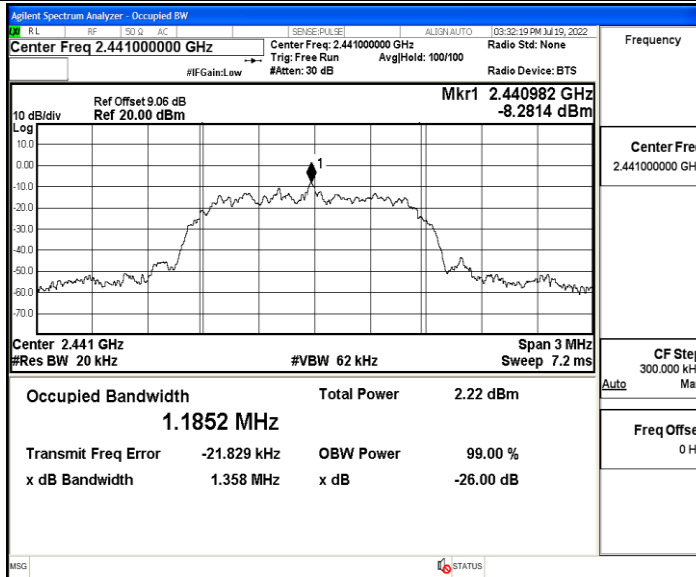
DH5_Ant1_2480



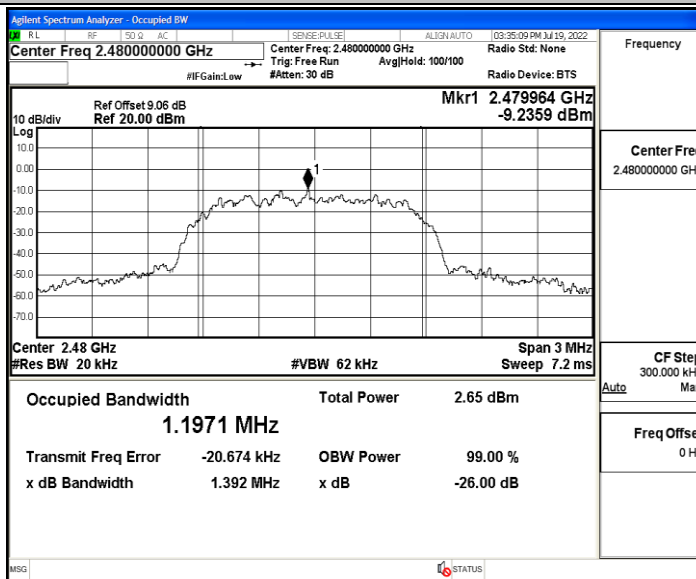
2DH5_Ant1_2402



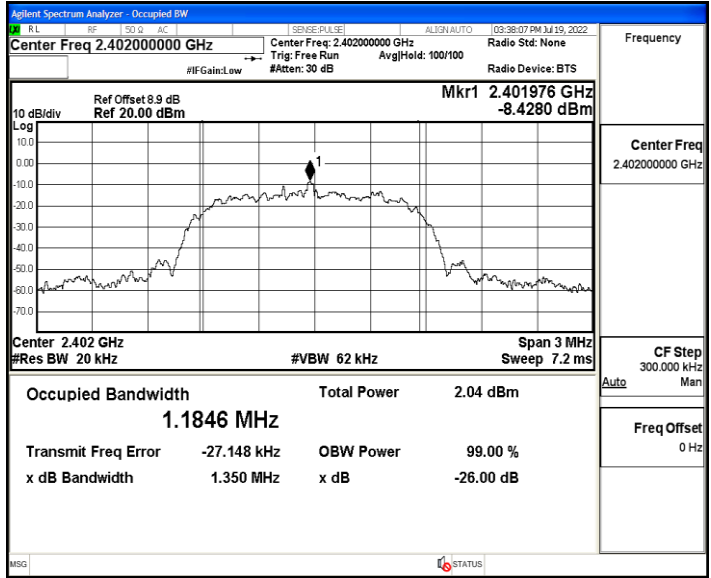
2DH5_Ant1_2441



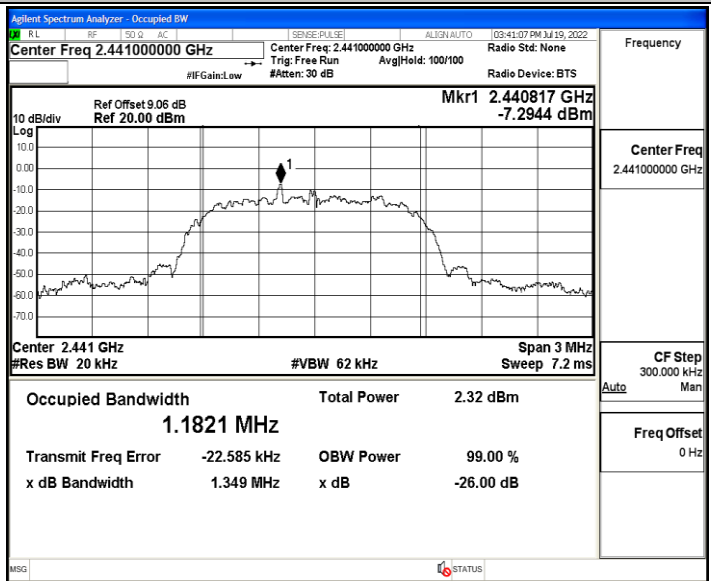
2DH5_Ant1_2480



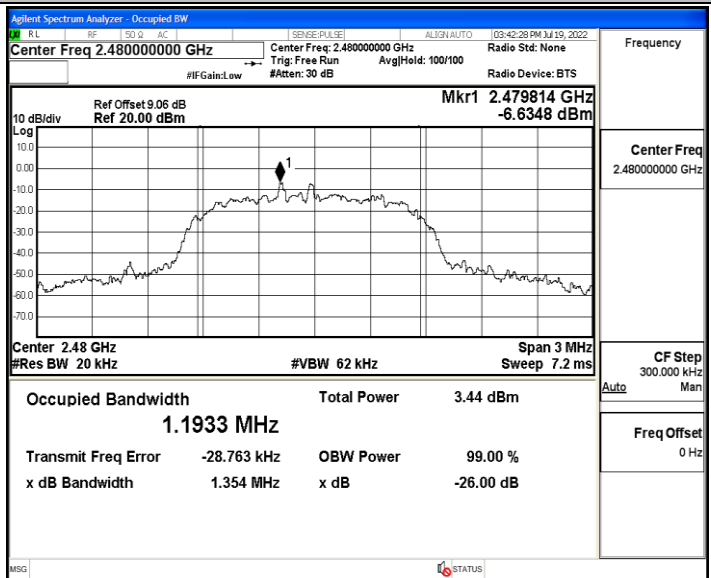
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



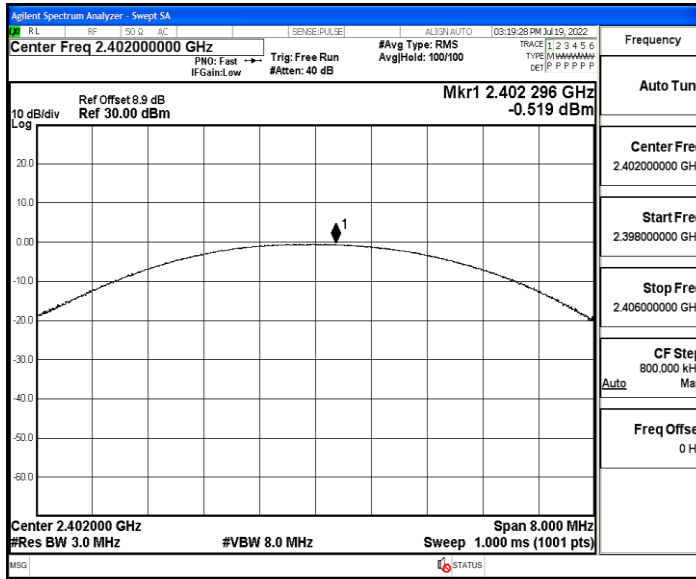
Appendix C: Maximum Peak conducted output power

Test Result

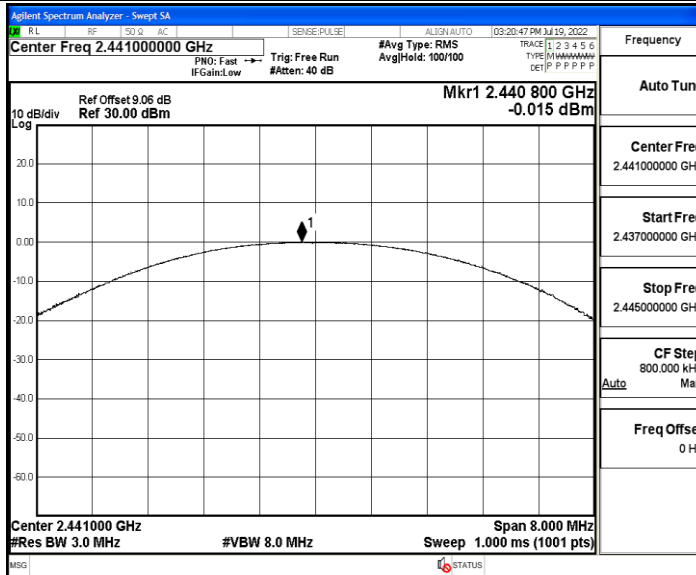
| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| DH5 | Ant1 | 2402 | -0.52 | ≤30 | PASS |
| | | 2441 | -0.02 | ≤30 | PASS |
| | | 2480 | 0.86 | ≤30 | PASS |
| 2DH5 | Ant1 | 2402 | -1.8 | ≤20.97 | PASS |
| | | 2441 | -1.25 | ≤20.97 | PASS |
| | | 2480 | -0.62 | ≤20.97 | PASS |
| 3DH5 | Ant1 | 2402 | -1.28 | ≤20.97 | PASS |
| | | 2441 | -0.72 | ≤20.97 | PASS |
| | | 2480 | -0.05 | ≤20.97 | PASS |

Test Graphs

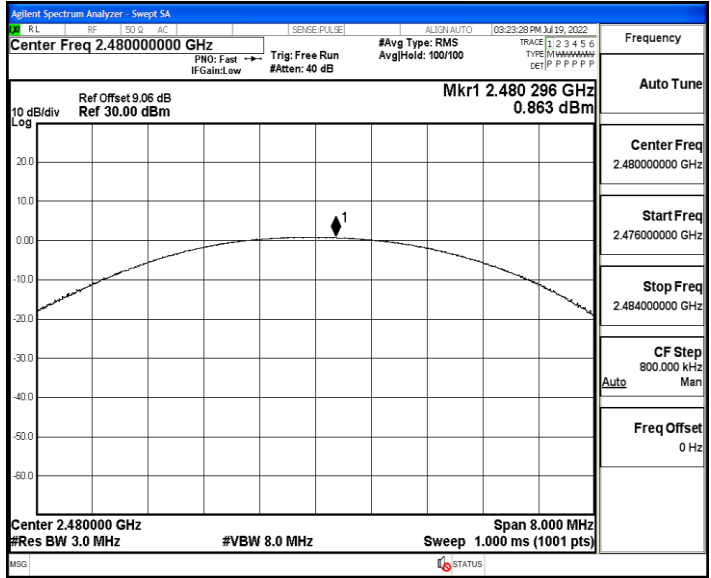
DH5_Ant1_2402



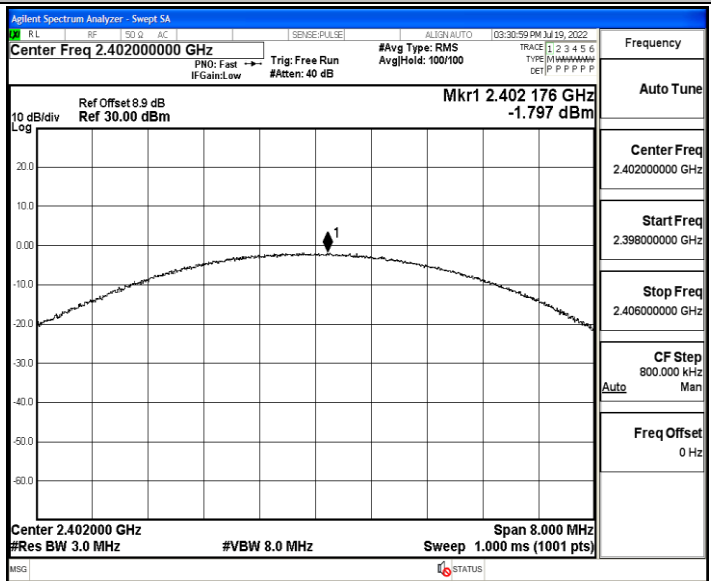
DH5_Ant1_2441



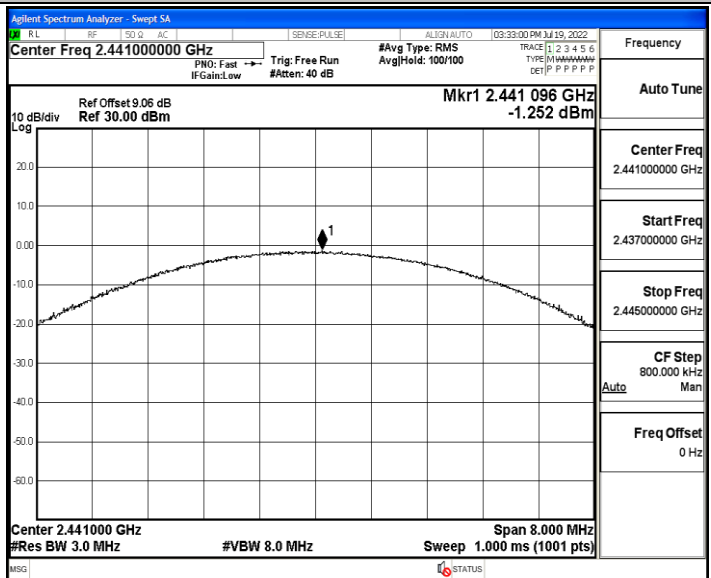
DH5_Ant1_2480



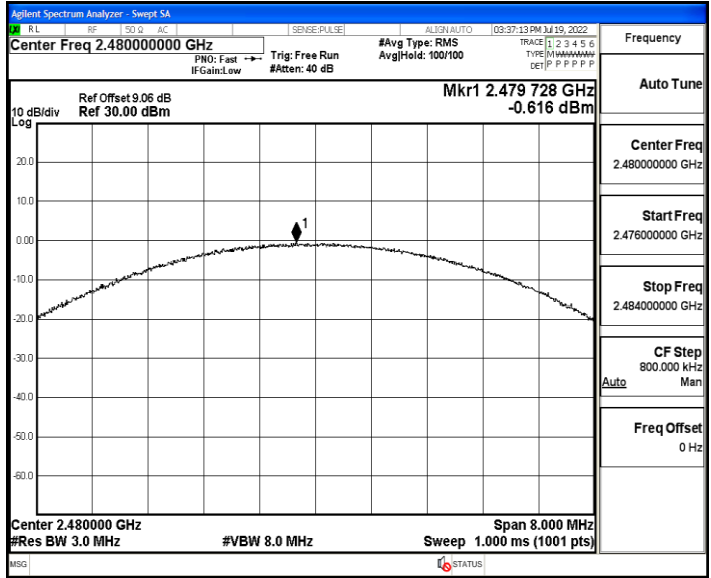
2DH5_Ant1_2402



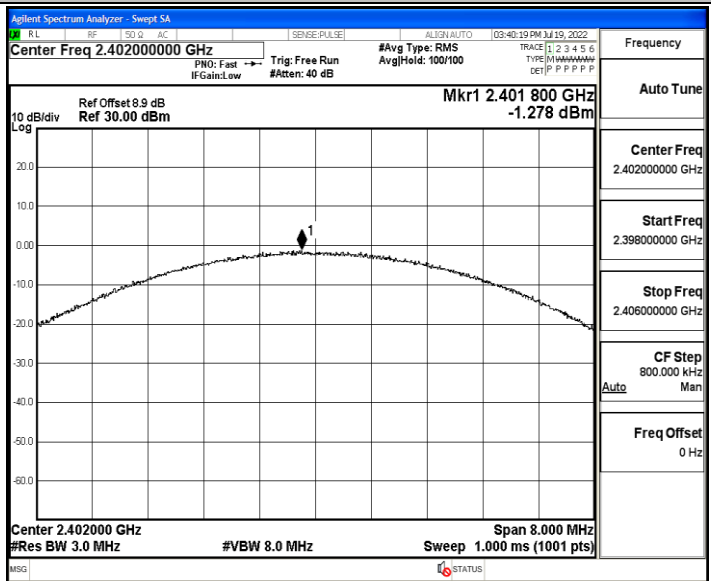
2DH5_Ant1_2441



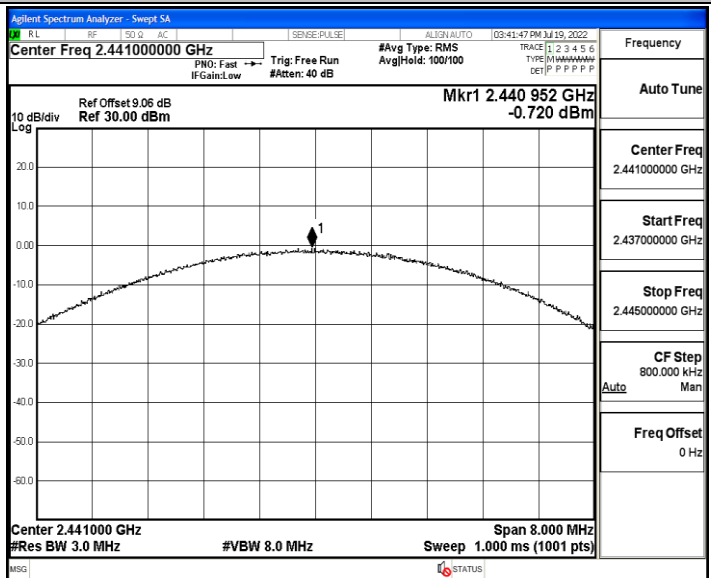
2DH5_Ant1_2480



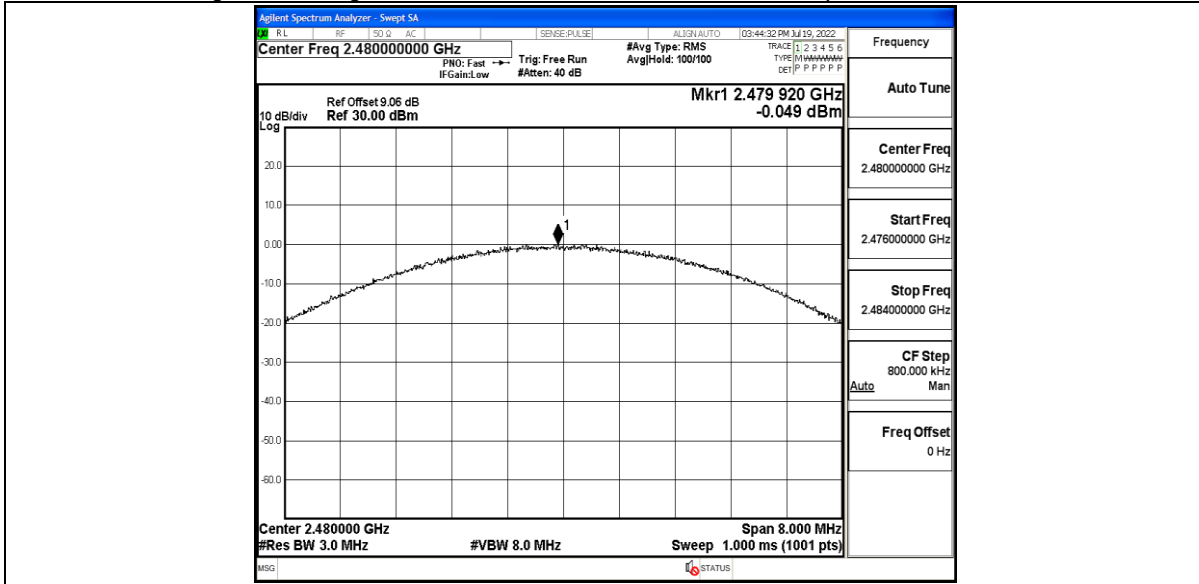
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



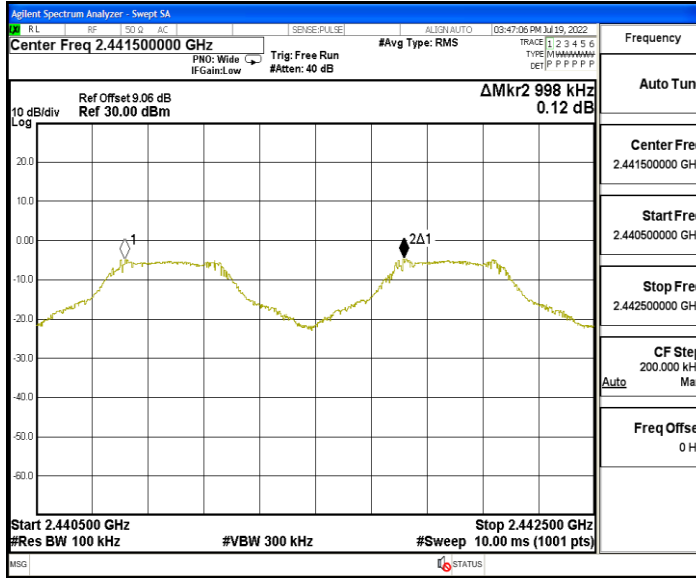
Appendix D: Carrier frequency separation

Test Result

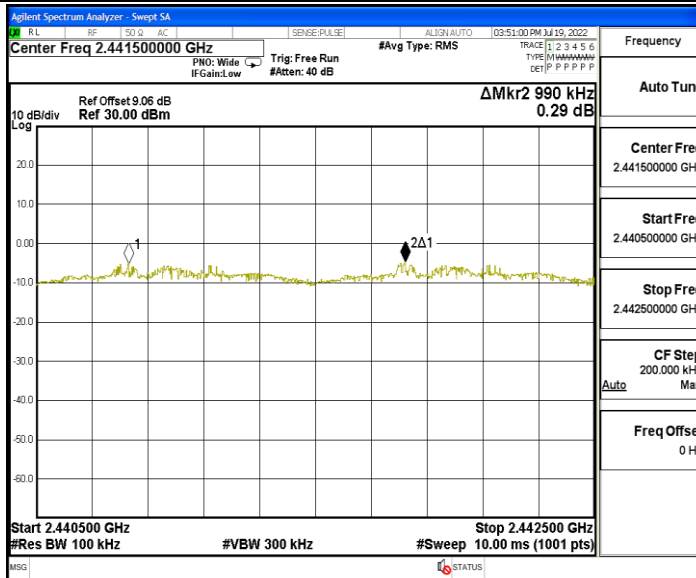
| TestMode | Antenna | Channel | Result[MHz] | Limit[MHz] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| DH5 | Ant1 | Hop | 0.998 | ≥0.936 | PASS |
| 2DH5 | Ant1 | Hop | 0.99 | ≥0.890 | PASS |
| 3DH5 | Ant1 | Hop | 0.984 | ≥0.890 | PASS |

Test Graphs

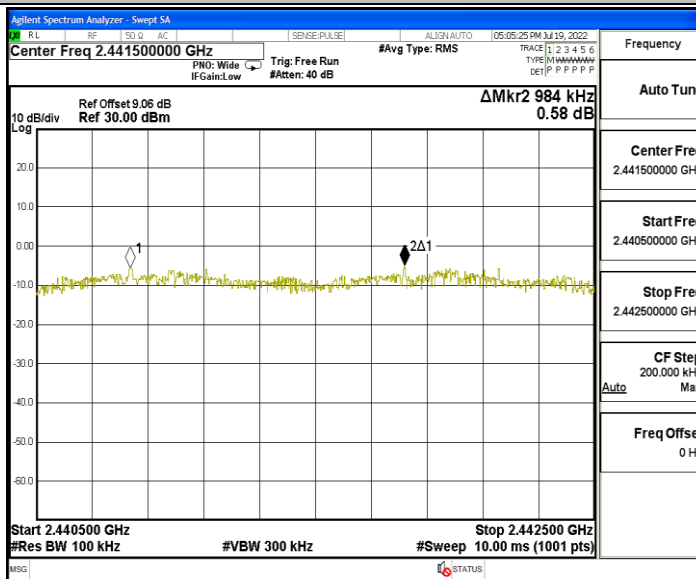
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



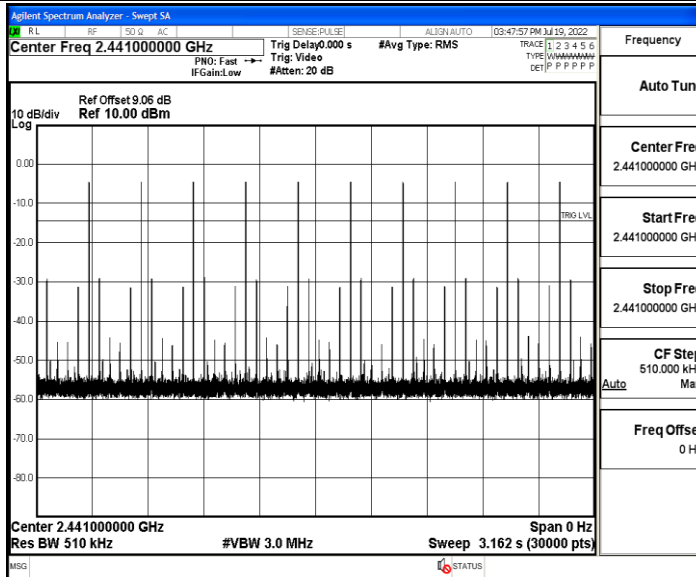
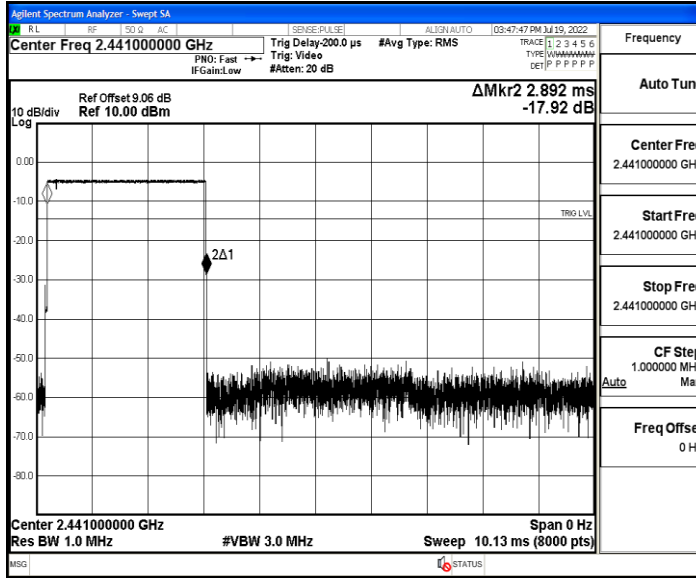
Appendix E: Time of occupancy

Test Result

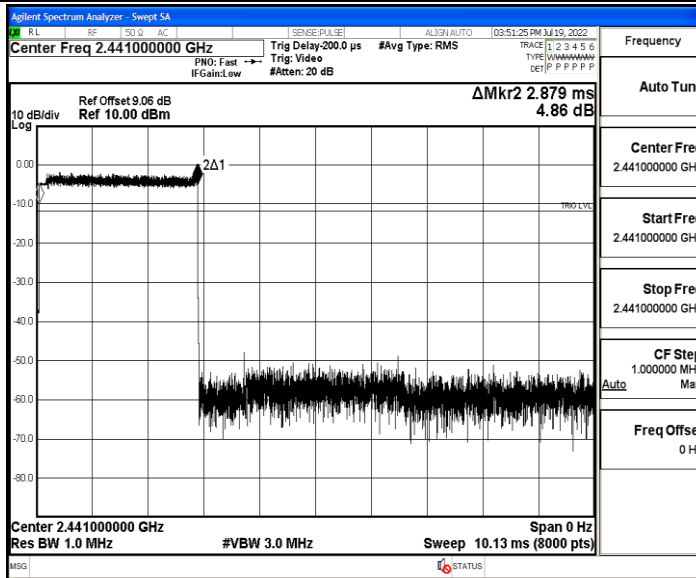
| TestMode | Antenna | Channel | BurstWidth [ms] | TotalHops [Num] | Result[s] | Limit[s] | Verdict |
|----------|---------|---------|--------------------|--------------------|-----------|----------|---------|
| DH5 | Ant1 | Hop | 2.89 | 110 | 0.318 | ≤0.4 | PASS |
| 2DH5 | Ant1 | Hop | 2.88 | 110 | 0.317 | ≤0.4 | PASS |
| 3DH5 | Ant1 | Hop | 2.88 | 110 | 0.317 | ≤0.4 | PASS |

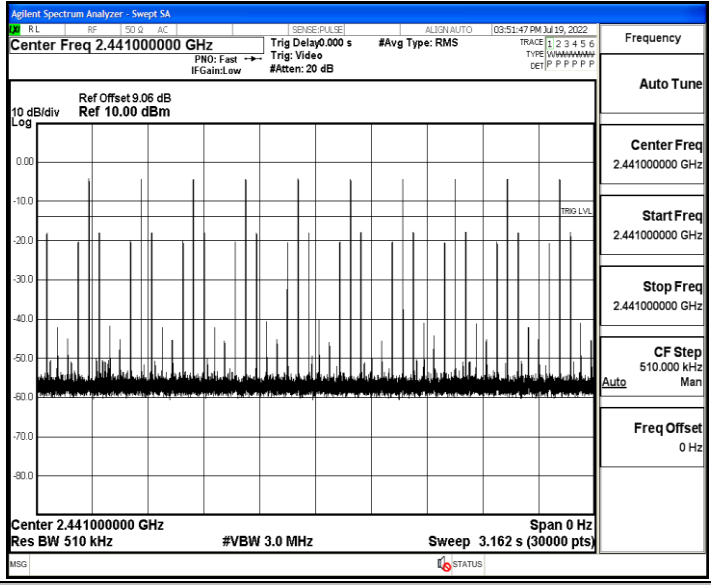
Test Graphs

DH5_Ant1_Hop

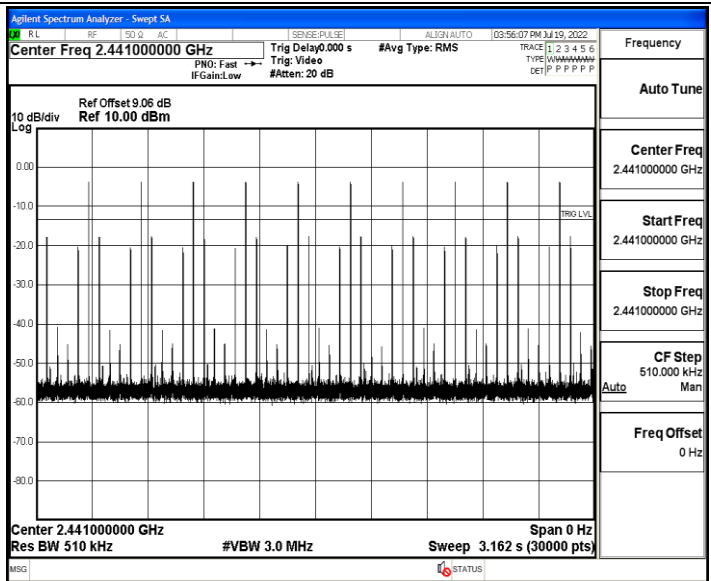
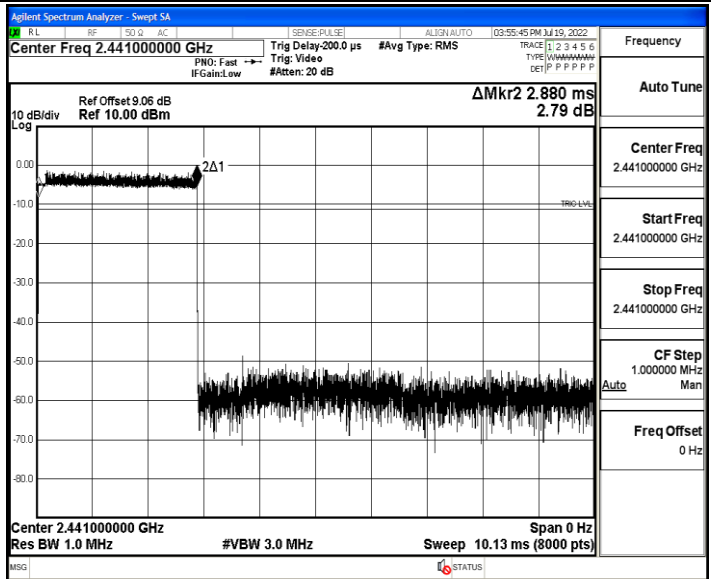


2DH5_Ant1_Hop





3DH5_Ant1_Hop



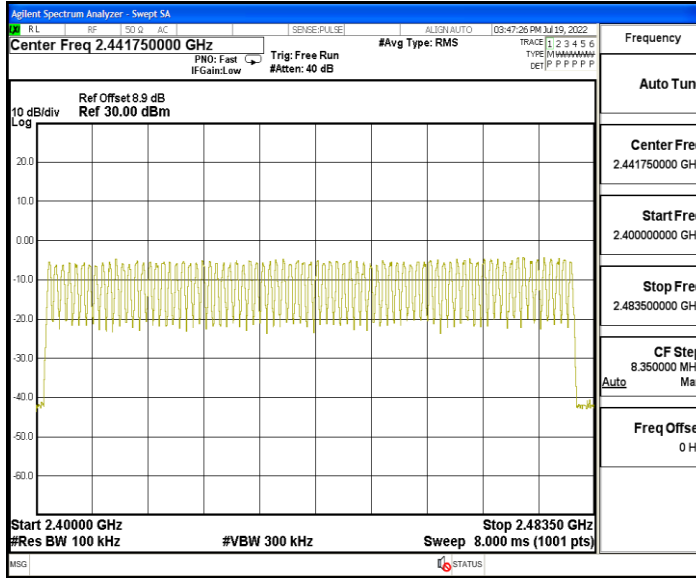
Appendix F: Number of hopping channels

Test Result

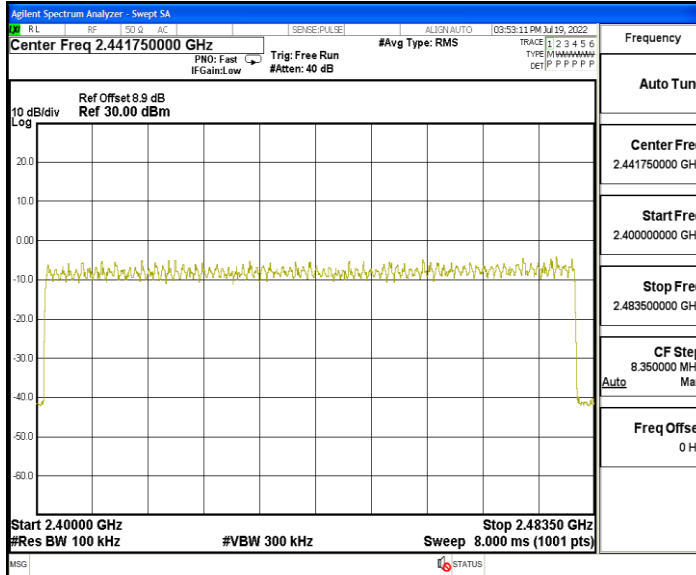
| TestMode | Antenna | Channel | Result[Num] | Limit[Num] | Verdict |
|----------|---------|---------|-------------|------------|---------|
| DH5 | Ant1 | Hop | 79 | ≥15 | PASS |
| 2DH5 | Ant1 | Hop | 79 | ≥15 | PASS |
| 3DH5 | Ant1 | Hop | 79 | ≥15 | PASS |

Test Graphs

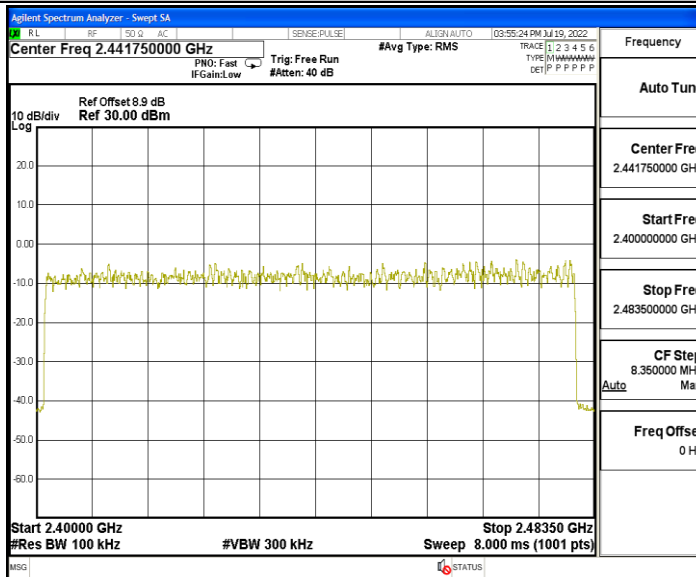
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



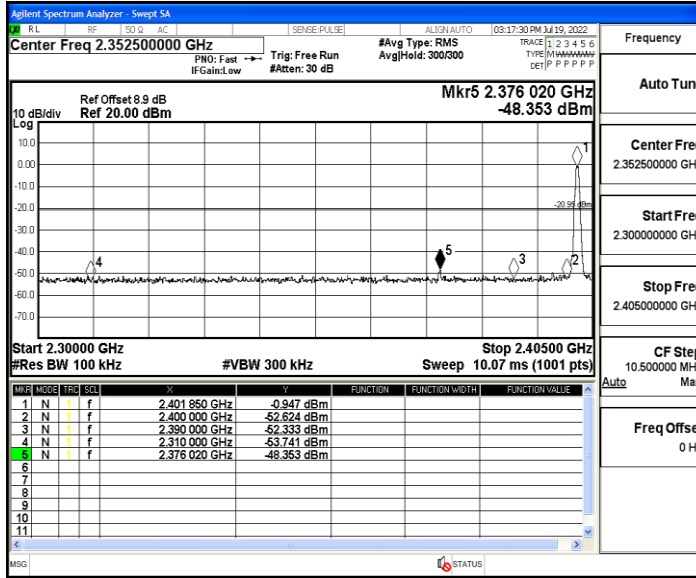
Appendix G: Band edge measurements

Test Result

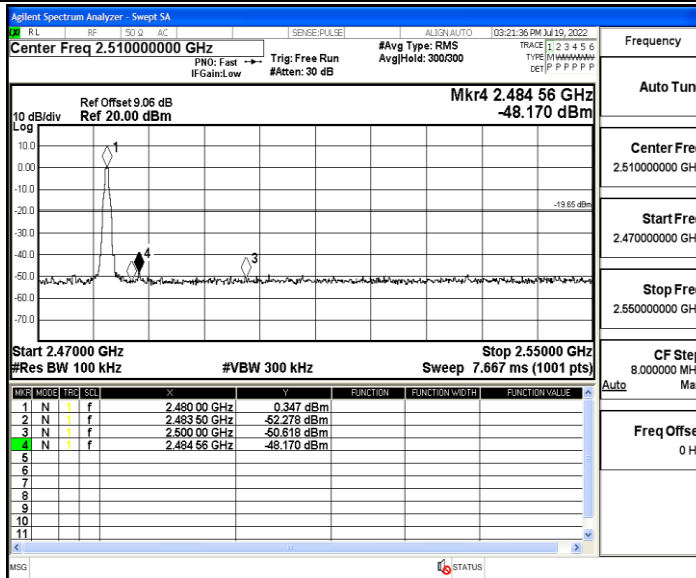
| TestMode | Antenna | ChName | Channel | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|--------|----------|----------------|--------------|-------------|---------|
| DH5 | Ant1 | Low | 2402 | -0.95 | -48.35 | ≤-20.95 | PASS |
| | | High | 2480 | 0.35 | -48.17 | ≤-19.65 | PASS |
| | | Low | Hop_2402 | -5.77 | -50.37 | ≤-25.77 | PASS |
| | | High | Hop_2480 | -3.82 | -48.87 | ≤-23.82 | PASS |
| 2DH5 | Ant1 | Low | 2402 | -6.74 | -50.57 | ≤-26.74 | PASS |
| | | High | 2480 | -4.86 | -49.25 | ≤-24.86 | PASS |
| | | Low | Hop_2402 | -7.67 | -50.71 | ≤-27.67 | PASS |
| | | High | Hop_2480 | -4.67 | -48.94 | ≤-24.67 | PASS |
| 3DH5 | Ant1 | Low | 2402 | -5.54 | -50.19 | ≤-25.54 | PASS |
| | | High | 2480 | -5.64 | -49.7 | ≤-25.64 | PASS |
| | | Low | Hop_2402 | -7.93 | -50.71 | ≤-27.93 | PASS |
| | | High | Hop_2480 | -6.07 | -49.39 | ≤-26.07 | PASS |

Test Graphs

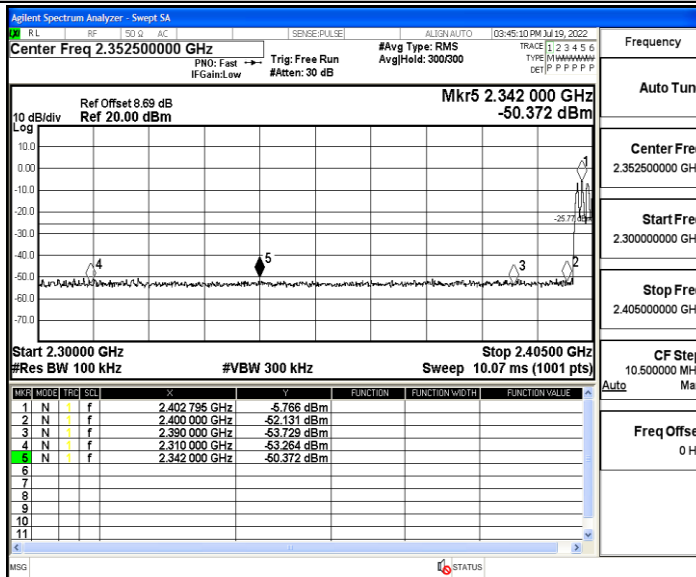
DH5_Ant1_Low_2402



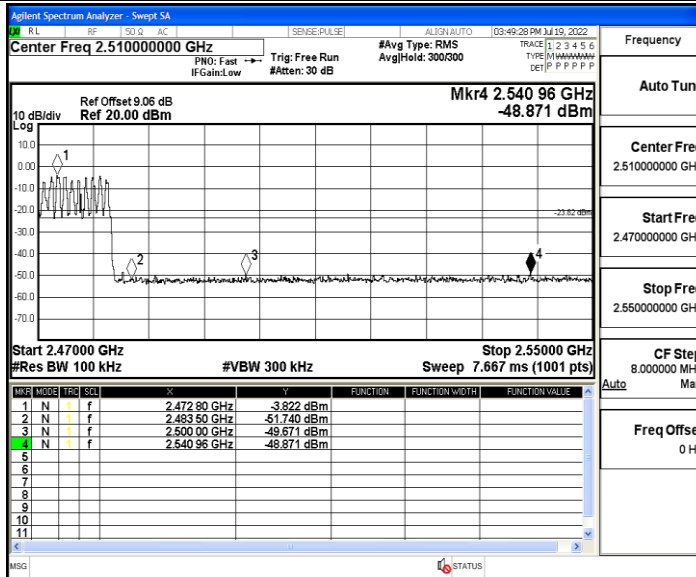
DH5_Ant1_High_2480



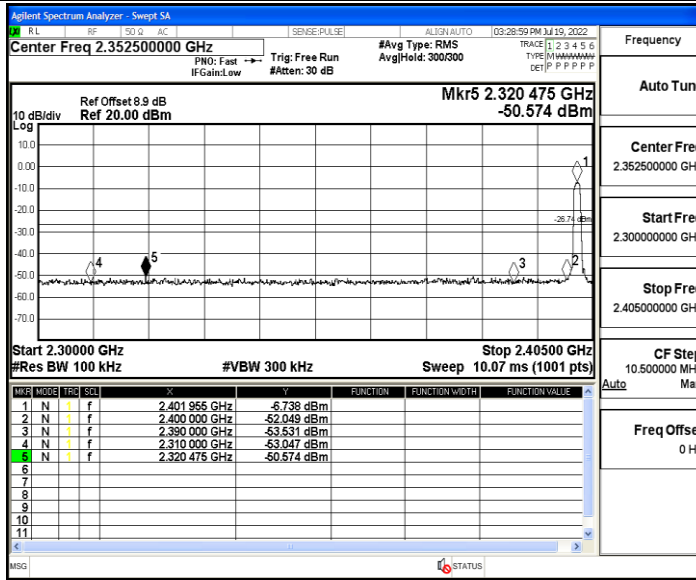
DH5_Ant1_Low_Hop_2402



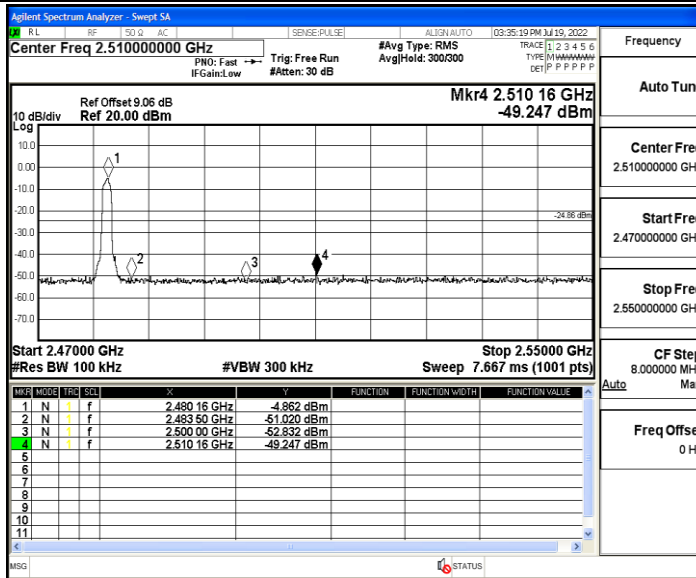
DH5_Ant1_High_Hop_2480



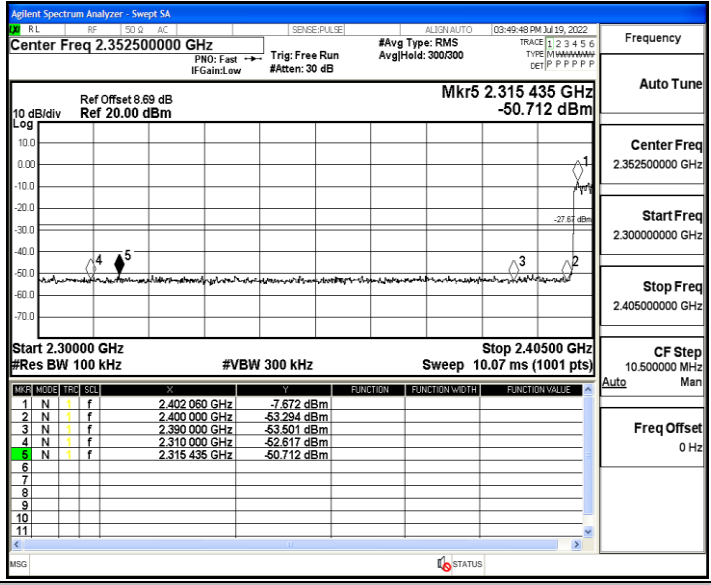
2DH5_Ant1_Low_2402



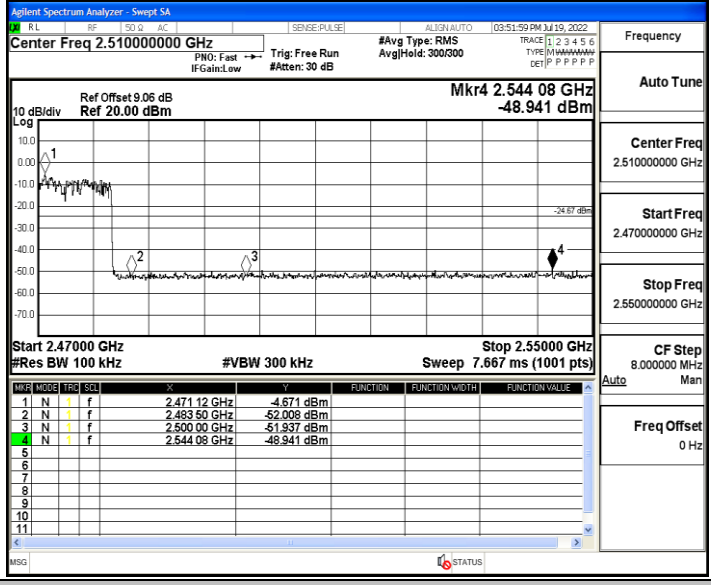
2DH5_Ant1_High_2480



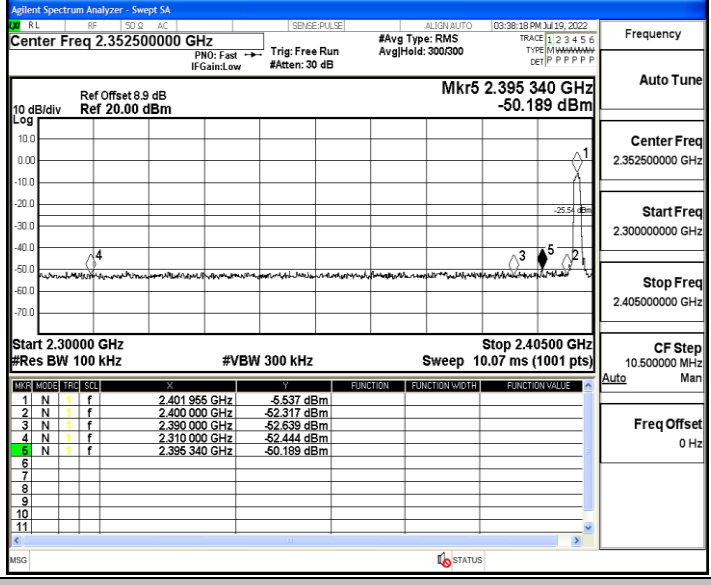
2DH5_Ant1_Low_Hop_2402



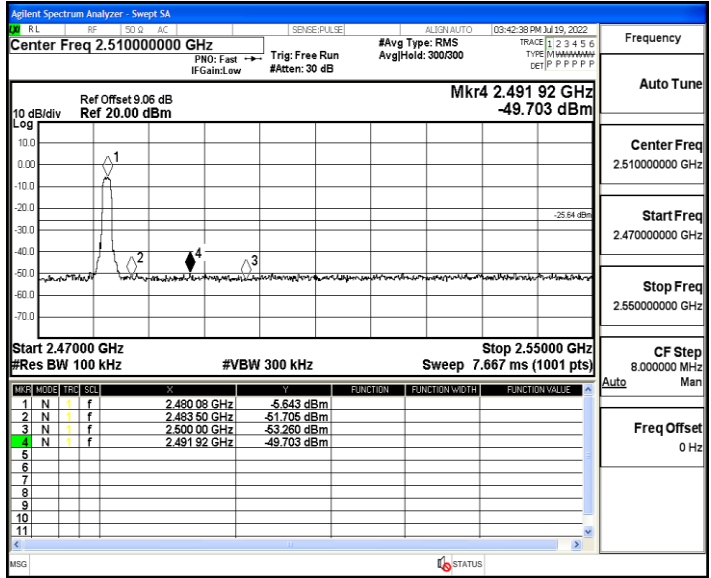
2DH5_Ant1_High_Hop_2480



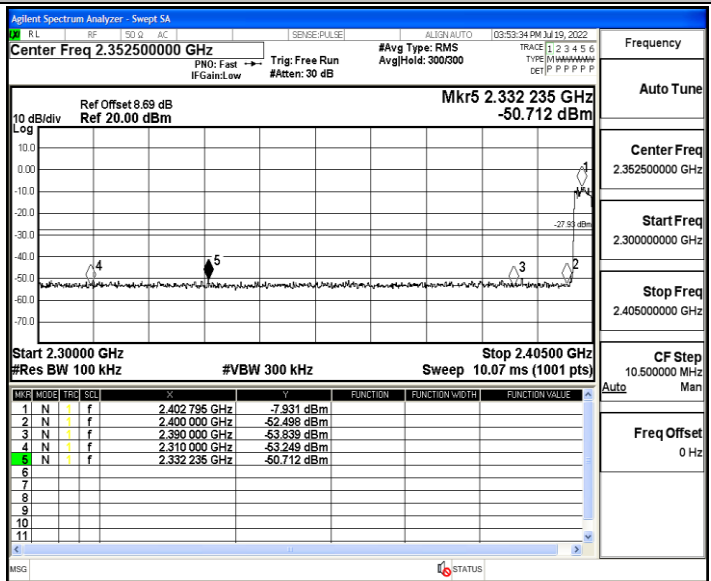
3DH5_Ant1_Low_2402



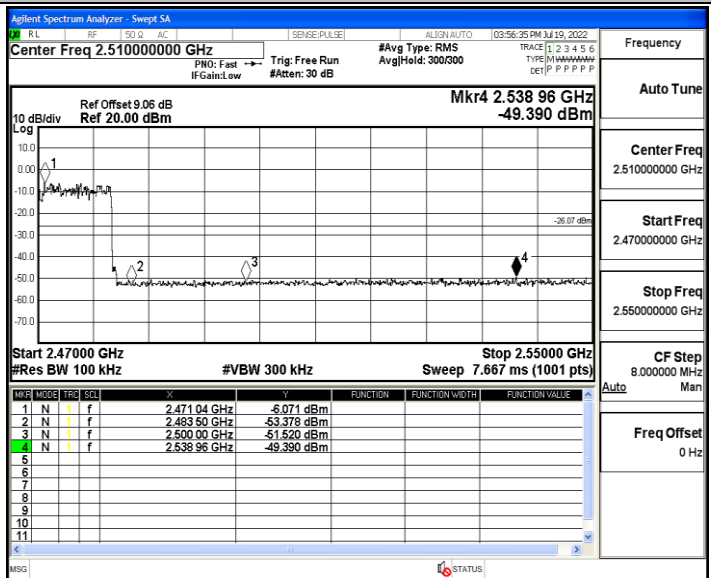
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480



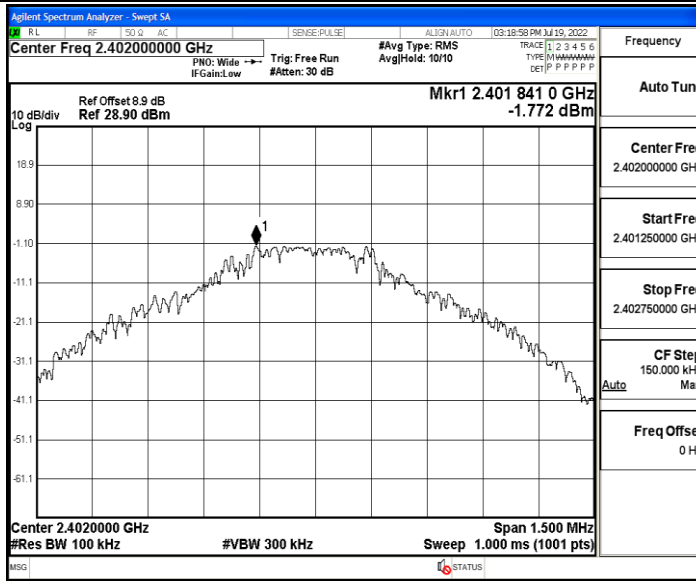
Appendix H: Conducted Spurious Emission

Test Result

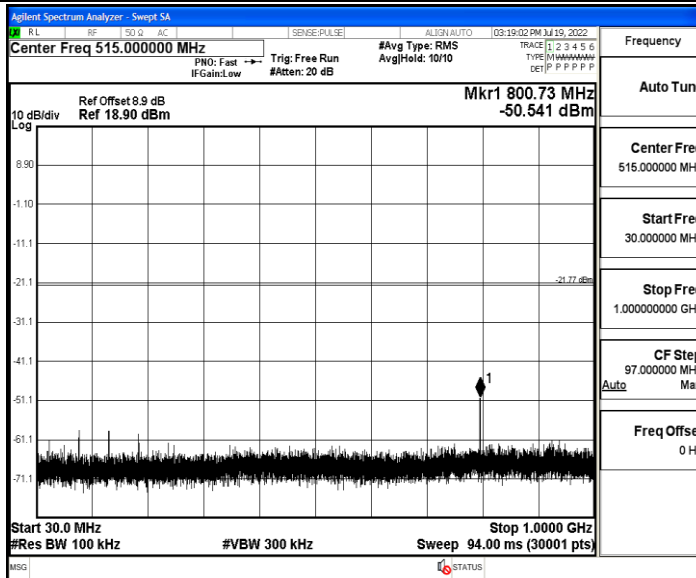
| TestMode | Antenna | Channel | FreqRange [MHz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|----------|---------|---------|--------------------|-------------------|-----------------|----------------|---------|
| DH5 | Ant1 | 2402 | Reference | -1.77 | -1.77 | --- | PASS |
| | | | 30~1000 | -1.77 | -50.54 | ≤-21.77 | PASS |
| | | | 1000~26500 | -1.77 | -41.29 | ≤-21.77 | PASS |
| | | 2441 | Reference | -1.15 | -1.15 | --- | PASS |
| | | | 30~1000 | -1.15 | -49.64 | ≤-21.15 | PASS |
| | | | 1000~26500 | -1.15 | -44 | ≤-21.15 | PASS |
| | | 2480 | Reference | -0.31 | -0.31 | --- | PASS |
| | | | 30~1000 | -0.31 | -48.15 | ≤-20.31 | PASS |
| | | | 1000~26500 | -0.31 | -39.84 | ≤-20.31 | PASS |
| 2DH5 | Ant1 | 2402 | Reference | -6.20 | -6.20 | --- | PASS |
| | | | 30~1000 | -6.20 | -57.54 | ≤-26.2 | PASS |
| | | | 1000~26500 | -6.20 | -49.01 | ≤-26.2 | PASS |
| | | 2441 | Reference | -6.79 | -6.79 | --- | PASS |
| | | | 30~1000 | -6.79 | -53.43 | ≤-26.79 | PASS |
| | | | 1000~26500 | -6.79 | -47.48 | ≤-26.79 | PASS |
| | | 2480 | Reference | -5.87 | -5.87 | --- | PASS |
| | | | 30~1000 | -5.87 | -54.61 | ≤-25.87 | PASS |
| | | | 1000~26500 | -5.87 | -49.55 | ≤-25.87 | PASS |
| 3DH5 | Ant1 | 2402 | Reference | -5.93 | -5.93 | --- | PASS |
| | | | 30~1000 | -5.93 | -56.67 | ≤-25.93 | PASS |
| | | | 1000~26500 | -5.93 | -50.77 | ≤-25.93 | PASS |
| | | 2441 | Reference | -7.35 | -7.35 | --- | PASS |
| | | | 30~1000 | -7.35 | -54.66 | ≤-27.35 | PASS |
| | | | 1000~26500 | -7.35 | -50 | ≤-27.35 | PASS |
| | | 2480 | Reference | -4.84 | -4.84 | --- | PASS |
| | | | 30~1000 | -4.84 | -53.63 | ≤-24.84 | PASS |
| | | | 1000~26500 | -4.84 | -49.01 | ≤-24.84 | PASS |

Test Graphs

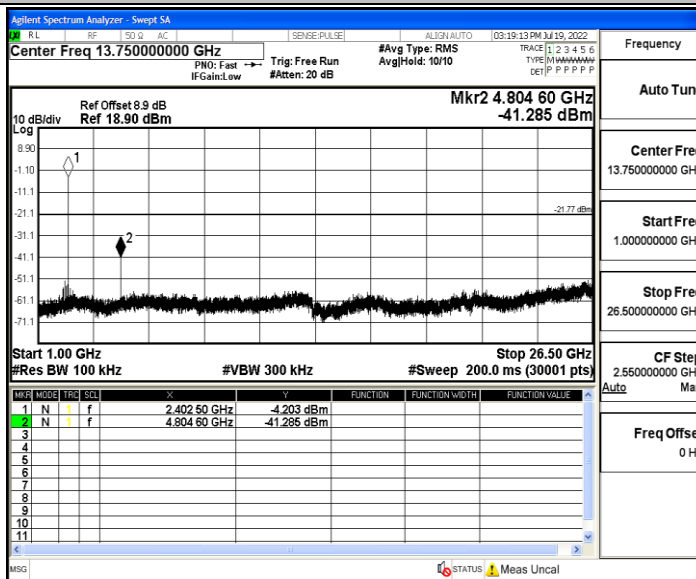
DH5_Ant1_2402_0~Reference



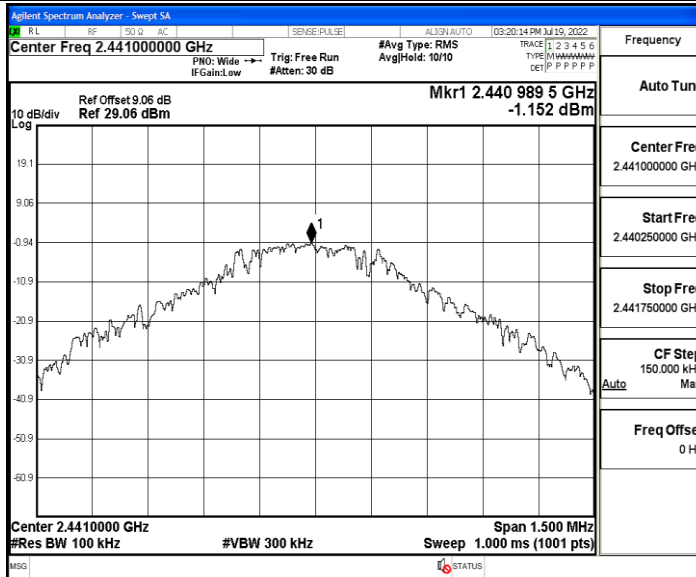
DH5_Ant1_2402_30~1000



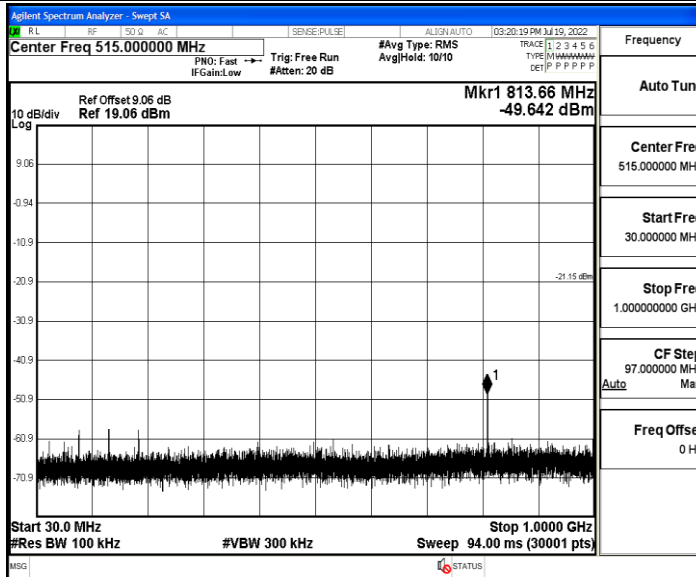
DH5_Ant1_2402_1000~26500



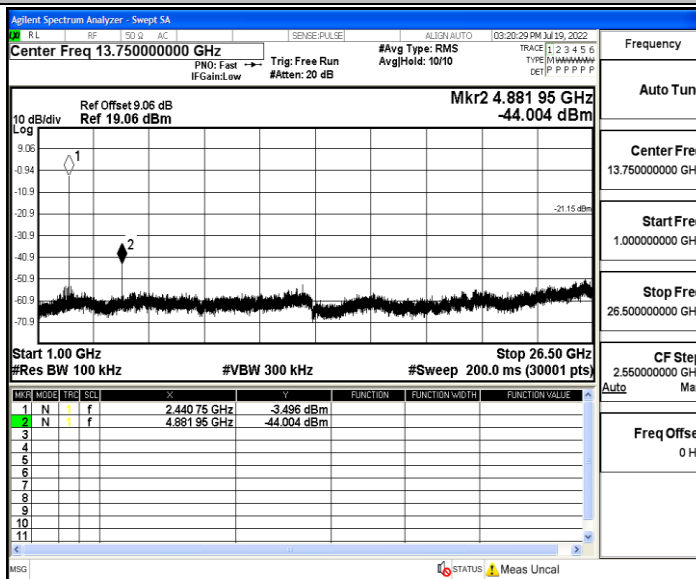
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



DH5_Ant1_2441_1000~26500



DH5_Ant1_2480_0~Reference